

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

10. (Twice Amended) A semiconductor device comprising:

a silicon substrate forming one of a collector and an emitter; the substrate being of a first conductivity type;

a layer of SiGe of a second conductivity type covering at least a portion of the silicon substrate;

a first layer of silicon of the second conductivity type at least substantially supported by and covering a substantial portion of the SiGe layer;

a first layer of polysilicon of the second conductivity type at least substantially supported by and covering a substantial portion of the [SiGe] first layer of silicon with the exception of a window region, the first layer of [SiGe] silicon having its surface unaffected by a process of etching within the window region, the first layer of [polysilicon] silicon forming a base terminal of the transistor; and,

a second layer of polysilicon of the first conductivity type [covering and contacting] insulated from the first layer of polysilicon and contacting the unetched first layer of silicon within the window region [unetched SiGe layer of the transistor], said second layer of polysilicon forming the other of the collector and the emitter terminals of the transistor.

11. (Once Amended) A semiconductor device as defined in claim 10 wherein the silicon substrate comprises n-type material and forms the collector.

12. (Once Amended) A semiconductor device as defined in claim 11 wherein the layer of SiGe comprises p-type material, and wherein the second layer of polysilicon comprises n-type material and forms the emitter.

13. (Twice Amended) A semiconductor device comprising:

a silicon layer of a first conductivity type;

a layer of SiGe of a second conductivity type covering at least a region of the silicon layer; and,

a first layer of silicon of the second conductivity type at least substantially supported by and covering a substantial portion of the silicon and SiGe layer;

a first layer of polysilicon of the second conductivity type at least substantially supported by and covering a substantial portion of the [SiGe] first layer of silicon with the exception of a small window region; and,

a second layer of polysilicon of the first conductivity type covering the window region and contacting the [SiGe] first layer of silicon within this small window region, where the [SiGe] first layer of silicon within the window region has a surface unaffected by a process of etching.

14. (Original) A semiconductor device as defined in claim 13, wherein the silicon layer serves as a substrate and is substantially thicker than the layer of SiGe.

15. (Original) A semiconductor device as defined in claim 13 wherein the SiGe layer has a substantially uniform thickness.

16. (Twice Amended) A semiconductor device as defined in claim 13 wherein the thickness of the SiGe layer covered by the [second] first layer of silicon is of a substantially [a] same thickness and impurity concentration as the remaining portion of the layer of SiGe covering at least a region of the silicon layer.

22. (Once Amended) A semiconductor device according to claim 10, comprising an insulating material disposed [layer] between the two layers of polysilicon.

23. (Once Amended) A semiconductor device according to claim 22, wherein the disposed insulating [layer] material is formed by reacting the first layer of polysilicon with a substance to form an insulating cover thereon.

24. (Once Amended) A semiconductor device according to claim 22, wherein the disposed insulating [layer] material is formed by depositing an insulating material thereon.

25. (Once Amended) A semiconductor device as defined in claim 10, wherein the first layer of silicon and the SiGe layer [has] have a substantially uniform thickness.

26. (Original) A semiconductor device as defined in claim 10, wherein the thickness of the SiGe layer covered by the second layer of polysilicon is of a substantially a same thickness and impurity concentration as the remaining portion of the layer of SiGe covering at least a region of the silicon layer.

27. (Once Amended) A semiconductor device according to claim 13, comprising an insulating material disposed [layer] between the two layers of polysilicon

28. (Once Amended) A semiconductor device according to claim 27, wherein the disposed insulating material [layer] is formed by reacting the first layer of polysilicon with a substance to form an insulating [cover] film thereon.

29. (Once Amended) A semiconductor device according to claim 27, wherein the disposed insulating material [layer] is formed by depositing an insulating material thereon.

30. (Twice Amended) A semiconductor device comprising:
a silicon substrate forming one of a collector and an emitter, the substrate being of a first conductivity type;
a layer of SiGe of a second conductivity type covering at least a portion of the silicon substrate;

a first layer of silicon of the second conductivity type at least substantially supported by and covering a substantial portion of the SiGe layer;

a first layer of polysilicon of the second conductivity type at least substantially supported by and covering a substantial portion of the [SiGe] first layer of silicon with the exception of a window region, the first layer of [SiGe] silicon having its surface unaffected by a process of etching within the window region, the first layer of [polysilicon] silicon forming a base terminal of the transistor; and,

a second layer of polysilicon of the first conductivity type [covering and contacting] insulated from the first layer of polysilicon and contacting the unetched first layer of silicon within the window region [SiGe layer of the transistor], said second layer of polysilicon forming the other of the collector and the emitter terminals of the transistor, wherein the first silicon layer [SiGe] layer has a [controllable] uniform thickness profile in a direction transverse the layers within the semiconductor substrate within predetermined limits within a region of the semiconductor substrate including at least a transistor, the [controllable] uniform thickness profile for providing substantially reproducible results for the thickness of the first silicon layer [SiGe] layer.

31. (Once Amended) A semiconductor device as defined in claim 30, wherein the [controllable] uniform thickness profile provides substantially reproducible electrical characteristics of the first silicon layer and the SiGe layer.

32. (Once Amended) A semiconductor device as defined in claim 31, wherein the uniform [controllable] thickness profile of the SiGe layer is other than a uniformly thick layer.